

3

In practical operation, the circle drawing tool is placed on top of a paper and a pencil is selectively inserted into any one of the pen insertion holes 14 and 24 according to the size of the circle needed and then the pencil is moved in a circle, resulting in the rotation of the inner circular board 20 or the outer board 10 with respect to each other so that circles of various diameters can be drawn selectively.

Referring farther to FIGS. 2, 3, an extension arm 5 having two protrusion points 51 disposed at one end is provided with a plurality of pen insertion holes 52 consecutively disposed thereon. In correspondence to the two protrusion points 51 there are two engagement holes 15 disposed on the outer board 10 so as to permit the extension arm to be attached to the outer board 10, as shown in FIG. 5. To make the connection of the extension arm 50 and the outer board 10 smooth, the frontmost end of the extension arm 50 is higher than the rest of the arm with a slant portion 53 defined therebetween so that when the frontmost end of the extension arm 50 is mounted onto the outer board 10, the rest of the arm 50 is kept close contact with the horizontal face, as shown in FIG. 5.

To avoid excessive ink to get the paper stained in the process of drawing, each pen insertion hole 14, 24 or 52 is provided with a widened recess 100 so that ink will not easily spread on the paper along with the rotation of the extension arm 50, the outer board 10 and the inner circular board 20.

I claim:

1. An improved circle drawing tool comprising:

a doughnut-shaped outer board;

a circular slide track; and

an inner circular board;

said doughnut-shaped outer board having a large central hole with said inner circular board being rotatably received therein;

said central hole being provided with a peripheral flange with a V-shaped groove formed at the root of said flange so as to permit said circular slide track having a V-shaped cross section to be housed therein;

said inner circular board having a slightly smaller diameter than said circular slide track so that said inner circular board is rotatably engaged with said doughnutshaped outer board;

a plurality of round holes of different diameters disposed on the peripheral area of said doughnut shaped

4

outer board, ranging consecutively from a smallest hole to a largest hole;

four radial lines of pen insertion holes separated from each other; said four radial lines being disposed at four positions at 90 degrees apart on said outer board;

a position of each starting point of each line being 1 mm farther away from the center of said outer board consecutively;

10 radial lines equally spaced being placed on said inner circular board, each line having plurality of consecutive pen insertion holes defined thereon with every two neighboring points being 10 mm spaced apart;

each starting point of all said 10 radial lines being 1 mm farther away consecutively from the center of said circular board;

on the peripheral wall of said inner circular board being disposed a recessed track in which a plurality of receiving cavities are located for housing rolling balls, said cavities being spaced at a proper distance from each other so that said rolling balls are able to be smoothly engaged with said V-shaped slide track, permitting said inner board and said outer board to be relatively rotated with respect to each other when a pen is placed in one of said pen insertion holes for drawing a circle.

2. The improved circle drawing tool as claimed in claim

1 wherein said doughnut shaped outer board is provided with two engagement holes so as to permit an extension arm having a line of pen insertion holes consecutively disposed thereon and a pair of protrusion points in correspondence to said engagement holes to be removably attached to said outer board; a frontmost end of said extension arm being slightly higher than the rest thereof and a slanted portion is disposed therebetween so as to keep said extension arm in close contact with a horizontal plane in operation.

3. The improved circle drawing tool as claimed in claim 1 wherein the inner circular board is provided with a protruded round portion serving as a magnifying means and each of said pen insertion holes is provided with a widened recess for preventing ink from staining a paper in the process of drawing circles.

* * * * *